

1. A two-dimensional active-matrix type light modulation device comprising:

a plurality of counter electrodes;

a drive circuit constituted by ferroelectric gate field-effect transistors respectively connected to said pixel electrodes.

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2 ~~3~~. The two-dimensional active-matrix type light modulation device as set forth in claim ~~1~~ or ~~2~~<sup>1</sup>, wherein said drive circuit writes data to all of said pixels and then applies a voltage for driving said light

modulating layer between said counter electrode and said pixel electrode in common for all pixels.

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4. The two-dimensional active-matrix type light modulation device as set forth in any one of claims 1 through 3, wherein said drive circuit changes a ferroelectric gate of said ferroelectric gate field-effect transistor to a first polarization state and then writes data in accordance with input of data so that said first polarization state is changed to a second polarization state or so that said first polarization state is held.

5. The two-dimensional active-matrix type light modulation device as set forth in any one of claims 1 through 4, wherein said drive circuit performs row selection with a gate electrode of said ferroelectric gate field-effect transistor and writes data with a source electrode and drain electrode of said ferroelectric gate field-effect transistor and a substrate electrode or back-surface electrode of said ferroelectric gate field-effect transistor.

6. The two-dimensional active-matrix type light modulation device as set forth in any one of claims 1 through 5, wherein said drive circuit performs modulation by binary static drive.

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7. A two-dimensional active-matrix type light-emitting device comprising:

a plurality of pixel electrodes arranged in the form of a two-dimensional matrix consisting of rows and columns;

a plurality of counter electrodes;

a plurality of light-emitting layers, each light-emitting layer being interposed between said pixel electrode and said counter electrode for emitting light in accordance with current flowing through the light-emitting layer between said pixel electrode and said counter electrode; and

a drive circuit constituted by ferroelectric gate field-effect transistors respectively connected to said pixel electrodes.

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8. The two-dimensional active-matrix type light-emitting device as set forth in claim 7, wherein said drive circuit writes data to said ferroelectric gate field-effect transistors in order of a row.

B 19 g. The two-dimensional active-matrix type light-emitting device as set forth in claim 7 or 8, wherein said drive circuit writes data to all of said pixels and then allows a current for driving said light-emitting layer to pass through said counter electrode

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and said pixel electrode in common for all pixels.

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10. The two-dimensional active-matrix type light-emitting device as set forth in any one of claims 7 through 9, wherein said drive circuit changes a ferroelectric gate of said ferroelectric gate field-effect transistor to a first polarization state and then writes data in accordance with input of data so that said first polarization state is changed to a second polarization state or so that said first polarization state is held.

11. The two-dimensional active-matrix type light-emitting device as set forth in any one of claims 7 through 10, wherein said drive circuit performs row selection with a gate electrode of said ferroelectric gate field-effect transistor and writes data with a source electrode and drain electrode of said ferroelectric gate field-effect transistor and a substrate electrode or back-surface electrode of said ferroelectric gate field-effect transistor.

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